HARM FROM HARM: EXTENDING THE CONSTRUCT OF MORAL INJURY TO INTERPERSONAL TRANSGRESSIONS AMONG EMERGING ADULTS

by

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ABSTRACT

Moral injury encompasses the negative behavioral, psychological, social, and spiritual consequences that arise after an individual experiences events that violate his or her deeply held moral beliefs, whether by commission, omission, or witnessing such an action by another individual. To date, moral injury and the only measure used to assess moral injury have only been studied with military populations and within the context of traumatic transgressions. In the current study, we first address the applicability of moral injury to youth populations and nontraumatic transgression. Secondly, we present the development and initial psychometric properties of the Moral Injury Perpetration, Self-forgiveness, and Atonement Scales for Youth (MIPSASY) in a sample of emerging adults. Participants included 379 primarily female, Caucasian undergraduates recruited from a psychology participant pool at a large Western university. Results of confirmatory factor analysis and parallel analysis indicated that the moral injury subscales of the MIPSASY have a five-factor latent structure. Further, results indicated that the MIPSASY scales demonstrate good internal consistency, test-retest reliability, convergent and divergent validity, and that the factor structure is invariant across genders. Future research will need to continue to validate the MIPSASY in youth populations given that moral injury is an important construct to include in the study of moral development and elucidates how harm may come from harm. Our study adds to the

growing literature on moral injury and is the first study to describe how moral injury may be implicated in youths' transgressions.

TABLE OF CONTENTS

LIST OF TABLES

INTRODUCTION

In our everyday interactions we are likely to encounter interpersonal situations in which we perpetrate harm on others. This harm may be physical, emotional, or relational and may be unintentional as we navigate between our needs and the needs of others. Being able to make sense of these events is essential to one's ability to maintain positive self-regard (Bandura, 1991; Bandura, 2002). As a result, a fundamental developmental task for children, adolescents, and emerging adults is to be able to make sense out of their transgressions as they develop their own moral identity and agency. Given that becoming a moral individual is important to the maintenance of a just and fair society, it is no surprise that examining how moral development progresses over development has been well-studied over a number of decades (Bandura, 1991; Gilligan, 1982; Kohlberg, 1969; Piaget, 1932; Smetana, 2006).

However, we know less about the psychological and emotional consequences that ensue after young people have intentionally or intentionally caused another. Can harm come as a consequence of causing harm to others? In his book recounting the personal stories of gang-involved youth participating in a gang-intervention program, Gregory Boyle (2011) eloquently attests that the violent acts these youth have perpetrated have left psychological and spiritual wounds for these youth and describes this as "harm as harm" (p. 81). The construct of *moral injury* could provide a useful framework for examining the psychological consequences that ensue when youth transgress toward others; however, moral injury has only been studied with military personnel and within

the context of traumatic transgressions. The goal of the current study is to first discuss the relevance of moral injury to youth populations and nontraumatic transgressions, and then second, present the development and initial psychometric properties of the Moral Injury Perpetration, Self-forgiveness, and Atonement Scales for Youth (MIPSASY) in a sample of emerging adults.

The Construct of Moral Injury

Moral injury encompasses the negative behavioral, psychological, social, and spiritual consequences that arise after an individual experiences events that violate his or her deeply held moral beliefs, whether by commission, omission, or witnessing such an action by another individual (Litz et al., 2009). Individuals who develop moral injury are theorized to bear a number of negative consequences. According to Litz and colleagues, individuals with moral injury may see themselves as "immoral," "irredeemable," and could experience negative changes in ethical attitudes and behaviors (Currier, Drescher, & Harris, 2014; Litz et al., 2009 p. 698). Other proposed symptoms include guilt, shame, alienation, reduced trust in others, aggression, poor self-care and self-harm (Drescher et al., 2011; Litz et al., 2009). Additionally, individuals suffering from moral injury are also thought to experience changes in or loss of spirituality, problems with forgiveness, and depression (Currier, Drescher, & Harris, 2014; Drescher et al., 2011).

Litz and colleagues (2009) have proposed a comprehensive model of how moral injury may develop in the aftermath of transgressions within the context of military service. They conceptualize moral injury as "perpetrating, failing to prevent, bearing witness to, or learning about acts that transgress deeply held moral beliefs and expectations" (p. 700). They suggest that such events could "entail participating in or

witnessing inhumane or cruel actions, failing to prevent the immoral acts of others, as well as engaging in subtle acts or experiencing reactions that, upon reflection, transgress a moral code" (p. 700). Using this definition, they propose that the concept of moral injury will help scholars and clinicians alike address the psychological, biological, spiritual, and social consequences that occur after an individual violates their deeply held moral beliefs and values, including the aforementioned negative consequences.

According to their model, Litz and colleagues (2009) suggest that it is not necessarily the exposure to potentially morally injurious events that leads to the development of moral injury. Instead, they suggest that it is how the individual ascribes meaning to the event, through processes such as shame, guilt, self-forgiveness, and self-condemnation (Litz et al., 2009). In particular, moral injury addresses the moral aspects of traumatic events and actions that other constructs such as posttraumatic stress disorder (PTSD; American Psychiatric Association, 2013) fail to address. Therefore, the construct of moral injury can potentially help explain how individuals' beliefs and sense of themselves as a moral being exacerbate the distress they experience after they have hurt another person (Wainryb, 2011). However, to date the concept of moral injury has only been studied within military populations and traumatic moral transgressions. The extant literature on youth's moral development suggests that moral injury may be applicable across development and to nontraumatic transgressions.

The Role of Transgressions in Moral Development

Children's moral development occurs within the context of their daily interpersonal interactions with family and peers (Eisenberg & Valiente, 2002; Kohlberg, 1969; Piaget, 1932; Wainryb, Brehl, & Matwin, 2005; Yoo, Fang, & Day, 2013).

Beginning in the preschool years, children begin to develop theory of mind allowing them to think in terms of self and other (Chandler & Lalonde, 1996). As they develop a theory of mind, they begin to learn that their own desires may not match the social norms they are required to follow resulting in both intentionally and unintentionally harming others. For example, researchers have studied how young children and adolescents handle conflicts of interests (i.e., activity or playmate preferences) with peers (Komolova & Wainryb, 2011), conflicts with siblings (Ram & Ross, 2001), and the process of children socially excluding others (Recchia, Brehl, & Wainryb, 2012). In sum, children and adolescents may act in ways that hurt others both intentionally and unintentionally.

Some scholars argue that these transgressive experiences may provide a crucial context for moral development, especially in regard to developing what has been coined *moral agency*. Moral agency is defined as "people's understanding and experience of themselves (and others) as agents whose morally relevant actions are based in goals and beliefs" (Pasupathi & Wainryb, 2010, p. 55). Specifically, Pasupathi and Wainryb (2010) argue that children and adolescents can develop moral agency by integrating the harm they do unto others with their broader sense of self, including their values, beliefs, and affective experiences. For example, by examining youth's narrative accounts of harming siblings and peers, Recchia and colleagues (2013) demonstrated that youth construct meaning from these interactions and often describe these events in terms of their needs and the needs of others, although these interpretations may differ depending on their relation to the victim. Furthermore, they argue that parents may be especially integral to this process by helping their children construct meaning from these events. For example, mothers may scaffold discussions about transgressive events by helping their children

reconcile their negative behaviors within their larger identity as moral agents (Recchia, Wainryb, Bourne, & Pasupathi, 2014).

One developmental period that may be important to individuals' growth as moral agents is emerging adulthood, generally considered to be the age period between 18 and 25. Even after adolescence has ended, research shows that emerging adults continue to grow as moral individuals within new contexts and developmental tasks (Kitchener, King, Davison, Parker, & Wood 1984; Krettenauer, Colasante, Buchmann, & Malti, 2014; Krettenauer & Mosleh, 2013). As adolescents transition to adulthood, they are less likely to be socially constrained by the supervision of authority figures, therefore providing them a context to act as autonomous moral agents. For example, during adolescence, parents may use "cocooning," in which they prevent their child from being in certain contexts where deviant behavior may occur (e.g., situations without adult supervision, or those involving associating with deviant peers, etc.; Grusec, Goodnow, & Kuczynski, 2000; Padilla-Walker & Thomson, 2005). However, in emerging adulthood, individuals are less likely to live with their parents and therefore, may not be protected from the temptation to engage in immoral behavior, and in need to exercise their own moral agency. Furthermore, emerging adults must learn to be morally agentic within the context of new developmental milestones including romantic relationships and educational and vocational pursuits (Shulman, Feldman, Blatt, Cohen, & Mahler, 2005). For example, although most college students attest that cheating on a romantic partner is wrong, majority of college students report that they have cheated on a romantic partner in the past (McAnulty & McAnulty, 2012). Thus, emerging adults must continue to make sense of the harm they may intentionally or unintentionally do to others.

In summary, the extant literature on moral development provides a rich basis for how individuals become moral agents, and that making sense of transgressions toward others is an important context for this development. By making sense of their transgressions, individuals enhance their moral development by construing these events into the context of their larger sense of themselves, their values, and their beliefs. Furthermore, this literature promotes the notion that youth transgress against others across development and actively strive to make meaning of these experiences; therefore, examining moral injury in youth is warranted.

Limitations to the Existing Research on Assessing Moral Injury

Given that the extant literature has primarily focused on moral injury in military veterans (Currier et al., 2014; Drescher et al., 2011; Litz et al., 2009; Stein et al., 2012), it is no surprise that the only measure developed to assess moral injury was designed for use with military populations. To date, moral injury has been measured through the use of the moral injury events scale (MIES; Nash et al., 2013), a measure consisting of nine items used to assess potentially morally injurious events. Nash and colleagues found that the MIES had a two-factor latent structure (perceived transgressions and perceived betrayals), whereas subsequent research has suggested the MIES may have a three-factor latent structure (transgressions by self, transgressions by others, and betrayal; Bryan et al., 2014). Although a relatively new measure, the MIES has demonstrated internal validity, test-retest validity, and both concurrent and discriminant validity (Nash et al., 2013). Further, subsequent studies have assessed the construct validity of the concept of moral injury more generally by utilizing in-depth interviews of military health care and

religious professionals, providing evidence that there is perceived clinical and research utility for this construct (Drescher et al., 2011; Vargas et al., 2013).

Given that the MIES and the concept of moral injury have been used only within military populations, scholars do not have an appropriate way to measure moral injury in young people. This is unfortunate given the need to explore moral injury in younger, non-military populations including children, adolescents, and emerging adults. Given that youth harm others in their daily social interactions, scholars are in need of a way to systematically measure moral injury taking into account that youth are still in the process of moral development, and therefore, moral injury may manifest and operate differently at each developmental stage. First, the types of transgressions among each developmental stage are likely to look different, coinciding with the developmental tasks of that stage, and therefore, may impact how moral injury develops and manifests in each age-range. For example, witnessing the death of a fellow service member may have a different impact than hitting a sibling during childhood vs. excluding a friend during adolescence vs. cheating on a romantic partner in emerging adulthood. Furthermore, cognitive complexity, the capacity for emotion regulation, and maturation of one's values increase across the lifespan, all may impact how individuals may attribute meaning to potentially morally injurious events (Krettenauer & Mosleh, 2013).

In addition to understanding developmental differences, it also is important to investigate how moral injury may function differently between boys and girls and women and men. To date, the few studies examining the MIES, and the construct of moral injury more generally, have either not included women in their samples (Currier et al., 2014; Nash et al., 2013; Stein et al., 2012) or have not examined whether the factor structure

has been equivalent across sexes (Bryan et al., 2014; Nash et al., 2013). Prior research on moral decision making suggests that it may be important to examine whether moral injury functions similarly or differently across the sexes. First, although research has demonstrated that girls and boys reason about moral dilemmas in similar ways (Jaffe & Hyde, 2000; Walker, 1984), there is evidence to suggest that girls may be more oriented toward considering the needs of others out of empathic concern (Gilligan, 1982; Jaffe & Hyde, 2000). Secondly, researchers have found that women report feeling more guilty about real-life, interpersonal conflicts than men do, suggesting that women and girls may be more susceptible to experience shame and guilt after a transgression than men and boys (Skoe et al., 1996; Williams & Bybee, 1994), which according to Litz's model (2009) would increase the risk for the development of moral injury.

Lastly, a further drawback of the MIES and the extant literature on moral injury is that little attention has been paid to examining factors that may mitigate the effects of moral injury. Litz's model (2009) suggests that moral injury may be mitigated by self-forgiveness, forgiveness by others, belief in atonement, or belief in a just world. Furthermore, Dreshcher's and colleagues' (2011) examination of the construct validity of moral injury also suggests that forgiveness may be integral to moral repair. However, the MIES does not include any items that would examine these factors directly. Subsequently, as we examine moral injury we would need to assess these processes in a systematic way while youth are primed to think about their past transgressions.

The Current Study

In the current study, our primary goal was to create a developmentally appropriate-measure that would allow us to study moral injury among children, adolescents, and emerging adults within the context of nontraumatic transgressions. To this aim, we developed the MIPSASY and examined the psychometric properties of our measure in a sample of emerging adults. Because moral injury has been most-well studied in adults, and the only existing measure to validate ours against is normed for adults, we decided to study our aims in the next youngest age category, emerging adults (ages 18-25) given there are more developmental similarities (i.e., cognitive complexity) between these two groups as compared to children and adolescents. As discussed above, past research suggests that moral development extends beyond childhood and adolescence, in which emerging adults may be exercising moral agency for the first time without the social constraints of parents, with more developed values, cognitive complexity, emotion regulation, and within new interpersonal interactions (i.e., romantic relationships, higher education, work place).

To accomplish these goals, we evaluated the following psychometric properties of the MIPSASY. First, we examined the factor structure of the MIPSASY scales in order to test our proposed four-factor structure of the perpetration subscales and single-factor structures for each of the three mitigating factor scales. Second, we examined the internal consistency reliability of the MIPSASY scales. We expected that each of the scales would demonstrate internal consistency with Cronbach's alpha values $\geq$ .70. Third, we examined the test-retest reliability of MIPSASY by examining the correlation between the MIPSASY scale scores of participants 2 weeks apart. We expected that the

correlation between time 1 and time 2 scores would be significantly correlated and that intraclass correlation coefficients would meet the minimum cut-off of $\geq$ .6.

Fourth, we examined the construct validity of the MIPSASY scales by examining correlations among scales that should be similar and dissimilar to the moral injury subscales and mitigating factor scales. It was expected that each subscale of the MIPSASY (e.g., commission with agency) would correlate more strongly with measures of convergent constructs (e.g., the MIES transgressions-self scale) than with measures of divergent constructs (e.g., the Heartland forgiveness scale). Further, we expected that the moral injury total score of the MIPSASY would be related to internalizing and externalizing symptoms as well as shame and guilt. Lastly, we sought to assess whether there are gender differences in the factor structure of the MIPSASY by testing for measurement invariance. This hypothesis was exploratory in nature given that previous studies using the MIES have not tested for measurement invariance between men and women.

METHOD

Scale Development

In order to achieve our primary aim, we created the moral injury perpetration, self-forgiveness and atonement scales for youth (MIPSASY; see Appendix). The measure has two sections, moral injury (18 items) and mitigating factors (self-forgiveness, forgivability by others, and belief in atonement; 23 items). Participants rate the 41 items on a five-point likert scale (1 = *Strongly disagree*; 5 = *Strongly agree*). Following from Litz's model (2009), moral injury is comprised of commission with agency, commission under duress, omission, witnessing, and the experience of betrayal. Items were written to be comprehensive at a 3rd grade reading level, according to the Fliesch-Kincaid Reading Level. Two items (items 2 and 14) were directly adapted from the MIES.

Mitigating factors included self-forgiveness, forgivability by others, and belief in atonement. All three of these factors are believed to impact the development of moral injury. Items for each of these factors were adapted from existing measures that were situational rather than dispositional in nature and also were reworded when necessary to be comprehensible at a 3rd-grade reading level. The self-forgiveness scale is comprised of one item (item 19) adapted from the suicide cognitions scale (Gibbs, 2011), five items adapted from the Heartland forgiveness scale (items 20-24; Thompson et al., 2005), six items adapted from the state self-forgiveness scale (items 25-30; Wohl, DeShea, & Wahkinney, 2008), and three items generated by the authors (items 31-33). The

forgivability by others scale is comprised of four items generated by the authors designed to assess the respondents' belief that others will forgive them for their transgressions. The belief in atonement scale is comprised of four items generated by the authors designed to assess the respondent's belief that there are things they can do to compensate for their transgressions.

Participants and Procedure

Participants included 379 female (n = 269) and male (n = 109) undergraduates ranging in age from 18 to 25 from a large public university in the Western United States. The racial distribution of the sample was 73.0 % White/Caucasian, 12.7% Asian, 7.1% Hispanic, 2.9% Other, 1.6% African American, 1.1% Native American, and 0.5% Pacific Islander.

All procedures were approved by the University of Utah's Institutional Review Board. Participants were recruited from an undergraduate participant pool for students required to participate in research for course credit. Participants who did not wish to participate in research were offered an alternative credit assignment to reduce coercion. Undergraduate and graduate level research assistants described the study to participants as a group and provided informed consent. Participants who elected to participate were administered a battery of questionnaires on a desktop computer in a large computer lab. Prior to filling out the questionnaires, participants were asked to write about a time when they committed a moral transgression. The survey was hosted on Qualtrics, a survey program utilized in the social sciences that allows for online and offline administration.

A separate sample of participants was recruited in order to collect longitudinal data to examine test-retest reliability of the MIPSASY. Using the same procedure

described above, participants who consented were administered the MIPSASY on a lab computer and then re-administered the MIPSASY 2 weeks after the initial administration. This sample included 140 undergraduates (n_{males} = 46; $n_{females}$ = 94) ranging in age from 18 to 25. The racial distribution was similar to the original sample (68.6% Caucasian/White; 31.4% ethnic minority); 0.8% of participants dropped out between time 1 and time 2 for a final sample size of 112.

Convergent and Discriminant Validity—Perpetration, Forgiveness, and Self-Acceptance

Moral injury. The moral injury events scale (MIES; Nash et al., 2013) is a nine-item self-report scale that is designed to assess personal distress in regard to perceived transgression by others/self, and betrayal by others. It has two subscales: perceived transgressions by self or others and perceived betrayal by others. In the current study, we used an alternative factor structure derived from Bryan and colleagues (2014) which suggests a three-factor structure with the following subscales: transgressions-self, transgressions-other, and betrayal. Participants rate how much they agree with each item on a six-point Likert scale (*strongly agree* to *strongly disagree*) with higher scores indicating greater moral injury. The MIES has demonstrated good construct validity and reliability. Internal consistency in the current sample was good: Total score $\alpha = .84$, perceived transgressions by self or others scale, $\alpha = .86$, and perceived betrayals by others, $\alpha = .81$.

Self-forgiveness. Participants completed the Heartland forgiveness scale (HFS; Thompson et al., 2005), an 18-item self-report measure designed to assess dispositional forgiveness, or the capacity for self-forgiveness outside of the context of a specific

situation. The HFS has demonstrated convergent validity, internal consistency reliability, and test-retest reliability. Participants rate each item on a seven-point likert scale ranging from 1 = *almost always false of me* to 7 = *almost always true of me*. The HFS contains three subscales: forgiveness of self (i.e., *I hold grudges against myself for negative things I've done*.), forgiveness of others (i.e., *I continue to be hard on others who have hurt me*.), and forgiveness of situations (i.e., *I eventually make peace with bad situations in my life*). Participants' answers can be summed into a total score or using the three subscales. In the current sample, internal consistency was good, forgiveness of self, $\alpha = .77$, forgiveness of others, $\alpha = .79$, forgiveness of situations, $\alpha = .78$, and total score $\alpha = .89$. The forgiveness of situations subscale was not used in the present analyses.

Self-condemnation. The scales of psychological well-being (Ryff, 1989) were designed to measure nonhedonic aspects of well-being including purpose in life, self-acceptance, positive relations with others, autonomy, environmental mastery, and personal growth. The self-acceptance subscale was used in the present analyses which we construed as the opposite of self-condemnation. Participants rate 14 items on a six-point likert scale (1 = *strongly disagree*, 6 = *strongly agree*). A total score ($\alpha = .93$) was used in the present analyses with higher scores indicating a positive attitude toward the self, acknowledging and accepting multiple aspects of self including good and bad qualities, and feeling positive about past life events.

Construct validity—shame and guilt. Participants completed the state shame and guilt scale (Marschall, Sanftner, & Tangney, 1994), a 15-item, well-validated self-report measure of in-the-moment feelings of shame, guilt, and pride experiences. Participants rate each item on five-point likert scale (1 = *Not feeling this way at all*, 5 = *Feeling this*

way very strongly). The shame scale (α = .82) and guilt scale (α = .85) were utilized in the present analyses.

Construct Validity—Internalizing and Externalizing Symptoms

The Beck depression inventory-II (Beck, Steer & Brown, 1996) is a well-validated, 21-item questionnaire used to measure the severity of depression by assessing cognitive, affective, behavioral, and physiological symptoms. The instrument is not used to diagnose depression, but rather to identify depressive symptoms that are consistent with diagnostic criteria. Responses on the BDI-II are rated from 0 (*low intensity*) to 3 (*high intensity*). Scores range from 0-63 with higher scores indicating higher depressive symptoms. Total scores of 0-13 are considered in the minimal range, 14-19 is mild, 20-28 is moderate, and 29-63 scores of are considered severe. Reliability in the current sample was good, α = 0.89.

Participants completed the 20-item trait and 20-state portions of the state-trait anxiety inventory for children (STAIC; Spielberger, 1973), which probes broadly for participants symptoms of stable or trait-like anxiety (e.g., *I worry about making mistakes, I notice my heart beats fast, It's hard for me to fall asleep at night*). Items are scored on a 1 to 3 scale, with a score of 1 indicating *hardly ever* and a score of 3 indicating *often*. The reliability and validity of the STAIC have been documented in samples of adolescents (aged 12-18; Kirisci, Clark, & Moss, 1996). Cronbach's alpha in this sample was α = .64 for state-anxiety and α = .90 for trait anxiety. The trait-anxiety scale was used in the present analyses.

Participants were administered the 26-item adolescent version of the Cook-Medley hostility index (Liehr et al., 2006), an empirically-derived measure used to assess

hostility. Participants rated items as *True* or *False* (e.g., *I think a great many people exaggerate their problems to get the sympathy and help of others*). Scores can range from 23 to 92, with higher scores indicating greater hostility. The scale has demonstrated high internal consistency reliability and has been shown to be valid in a racially and ethnically diverse sample of adolescents. In this sample, Cronbach $\alpha = .72$.

RESULTS

Factor Structure: MIPSASY Perpetration

To achieve the first aim, a confirmatory factor analysis (CFA) was conducted to evaluate the theorized structure of the MIPSASY. It was hypothesized that 18 items comprising the moral injury section of the MIPSASY would load on to four factors corresponding to: commission with agency, commission under duress, omission, and witnessing morally injurious events. It was hypothesized that three mitigating scales (self-forgiveness, forgivability by others, and belief in atonement) would each have a one-factor structure. The CFAs were performed with MPlus 7.11 software (Muthen & Muthen, 1998-2011) using robust maximum likelihood estimation (MLR). Subsequently, we used the Sattora-Bentler chi square correction (Sattora & Bentler, 1994) in our chi-square difference tests when comparing models.

Adequacy of model fit was assessed using a variety of fit indices including the chi square, the root mean square error of approximation (RMSEA; Steiger, 1990), the comparative fit index (CFI; Hu & Bentler, 1999), the Tucker-Lewis Index (TLI; Tucker & Lewis, 1973), and the standardized root square mean residual (SRMSR; Bentler, 1990). Although strict criteria do not exist to evaluate these various fit indices, Hu and Bentler (1999) propose that an RMSEA of .08 or less is adequate, whereas values of .06 or less are excellent. CFI and TLI values of .90 or greater are adequate fit and values of .95 or higher indicating excellent fit. For SRMSR, values of .05 indicate adequate fit.

Lastly, nonsignificant chi-square values indicate adequate fit. However, in data with multivariate nonnormality and large sample sizes, the chi square can reject an adequate fitting model.

For the four-factor moral injury model, factors were allowed to correlate and the variance of each factor was fixed to 1.0 for identification purposes. Results indicated that the four-factor model was a poor fit to the data, $\chi^2(127) = 665.05$, $p < .000$, *RSMEA* = .11, *CFI* = 0.83, *TLI* = 0.80, *SRMSR* = .06. Therefore, parallel analysis and exploratory factor analysis (EFA) were utilized to identify the MIPSASY's latent structure in the current sample. Parallel analysis (O'Connor, 2000) allows one to determine the number of factors that are beyond chance. First, this analysis creates a random dataset with the same numbers of observations and variables as the original data. Next, a correlation matrix is computed from the randomly generated dataset and then eigenvalues of the correlation matrix are computed. The random data eigenvalues are then compared to the real data eigenvalues. When the eigenvalues from the random data are larger than the eigenvalues from the factor analysis, these factors are considered random noise rather than constituting actual factors.

Next, the random data eigenvalues were compared to the real data eigenvalues that were obtained from an EFA that extracted 18 factors with the number of iterations fixed to zero. These results indicated that there may be seven factors. However, parallel analysis often indicates more factors than are warranted, and therefore, Buja and Eyuboglu (1992) recommend employing additional procedures to determine the number of factors. Subsequently, an EFA using principal axis factoring and direct oblimin rotation was conducted in order to examine the factor loadings of the seven-factor

structure. Direct oblimin (oblique) rotation was chosen because it was expected there would be moderate correlations among the derived factors. Visual inspection of the factor loadings suggested that the commission with agency, commission under duress, and witnessing factors should each be further split into two factors.

Upon examination, it appeared that these splits may be due to the fact that the items loading onto these split factors were similar in wording (for an example, see item 7 and 8 in Appendix). From this examination, it appeared that a five-factor solution (see Table 1 for a description of each competing model) in which the witnessing subscale was divided into two factors could also provide adequate fit. For example, in a study evaluating the psychometric properties of the MIES in a sample of Air Force personnel, Bryan and colleagues (2014) observed a three-factor structure of the MIES labeled as "transgressions-self," "transgressions-other" and "betrayal." This is in contrast to the two-factor structure originally conceived for the MIES comprised of "perceived transgressions" and "perceived betrayals" (Nash et al., 2013). Given these findings, it makes sense conceptually to separate items about betrayal from items that target witnessing transgressions from others.

With these considerations in mind, the best fitting model was selected using the fit indices and chi square differences described earlier. Fit statistics for each model tested are provided in Table 2. Chi square difference tests using the Sattora and Bentler (1994) correction indicated that the five-factor solution was superior to the four-factor solution, $\Delta\chi^2(5) = 428.39$, $p < .00$, and that the seven-factor solution was superior to the five-factor solution, $\Delta\chi^2(10) = 80.75$, $p < .00$. When comparing the four-factor and five-factor solutions, the modification indices of the four-factor model indicated that most of the

four-factor model's misfit was due to correlations between two items, items 7 and 8 as well as items 15 and 16 (see Appendix A). However, these problems were not present in the five-factor solution. Furthermore, the error residuals in the five-factor model were smaller than the four-factor model, with none of the standardized residuals exceeding an absolute value of three.

In sum, although the seven-factor solution provided the best fit according to fit statistics, given concern about possible method issues, the five-factor solution was selected considering that it also had adequate to good fit, was more parsimonious, and was consistent with the theorized structure. Table 3 shows the unstandardized factor loadings of the five-factor model. Each factor loading was higher than the recommended .320 level (Tabachnick & Fidell, 2001). The five-factor solution explained 65.07% of the observed total variance. The item-total correlations ranged from 0.31 to 0.69 ($p < .00$) with an average of 0.56. Skewness and kurtosis values for MIPSASY perpetration items were within normal limits, under absolute values of two and seven, respectively (Curran, West, & Finch, 1996). Skewness in the data ranged from -1.19 to 1.39; Kurtosis values ranged from -0.98 to 3.88.

Correlations among the latent factors were estimated for the five-factor model. These results are displayed in Table 4. Correlations among factors ranged from small to moderate (r range = .16 - .46). The weakest correlations were between commission under duress and the two variables of witnessing ($r = .16$, $p < .01$) and betrayal ($r = .19$, $p <$. 01). The strongest correlation observed was between commission with agency and omission ($r = .46$, $p < .00$). Sample descriptive statistics for the MIPSASY are presented in Table 5. No differences in means scores were observed between men and women apart

from the witnessing subscale. Men, $m = 8.89$, $sd = 1.40$, reported significantly higher scores of witnessing than women, $m = 8.43$, $sd = 1.82$, $t = 2.33$, $p = .02$.

Factor Structure: MIPSASY Mitigating Factors

Separately from the moral injury subscales of the MIPSASY, we also examined the factor structure of each scale of the mitigating factors included on the measure. The three scales (self-forgiveness, forgivability by others, and belief in atonement) were all predicted to have a one-factor structure. CFA was again employed to examine each scale's factor structure. A one-factor solution had adequate to good fit for both the forgivability by others scale, $\chi^2(1) = 3.29$, $p = .07$, *RSMEA* = .08, *CFI* = .99, *TLI* = .94, *SRMSR* = .01, as well as the belief in atonement scale, $\chi^2(1) = .05$, $p = .82$, *RSMEA* = .00, *CFI* = 1.00, *TLI* = 1.02, *SRMSR* = .00. For the forgivability by others scale, the one-factor solution explained 50.76% of the observed total variance and factor loadings ranged from .64 to .78. The item-total correlations ranged from 0.77 to 0.81 ($p < .00$) with an average of .79 and values of skewness (-1.44 to -.93) and kurtosis (.83 to 2.17) were within normal limits. For belief in atonement, the one-factor solution explained 63.73% of the observed total variance and factor loadings ranged from .79 to .82. The item-total correlations ranged from .85 to .87 ($p < .00$) with an average of .85 and values of skewness (-1.37 to -1.11) and kurtosis (1.23 to 2.13) were within normal limits.

On the other hand, a one-factor solution was a poor fit to the data for the self-forgiveness scale, $\chi^2(90) = 789.01$, $p < .00$, *RSMEA* = .14, *CFI* = .68, *TLI* = .63, *SRMSR* = .09. Subsequently, we again utilized parallel analysis and exploratory factor analysis (EFA) to identify the number of factors on the self-forgiveness scale. Using the procedures already described, results of the parallel analysis suggested that there may be

four factors. In order to examine the pattern of factor loadings, we conducted an EFA using principal axis factoring and direct oblimin rotation. Upon examination of the pattern of the factor loadings, it appeared that the items on the scale represent varying levels of self-forgiveness. For example, items 20, 22, and 23 (see Appendix) imply that the individual has forgiven him or herself, whereas items 26, 28, and 30 suggest that although individuals have done something wrong they can reconcile this with who they are. On the other hand, items 19, 21, 24, 25, 27, 29, and 31 suggest that the individual has not been able to forgive him or herself. Similarly items 32 and 33 suggest that the individual has not forgiven him or herself and should be publicly shamed or ostracized.

Given that the internal consistency of the scale was good ($\alpha = .90$) and that the items represent varying degrees of self-forgiveness, we decided to use a total score for subsequent analyses despite the suggested four-factor structure. The one-factor solution explained 50.76% of the observed total variance. The item-total correlations ranged from .50 to .76 ($p < .00$) with an average of .65 and values of skewness (range = -.58 to 1.47) and kurtosis (range = -1.06 to 1.71) were within normal limits. Sample descriptive statistics for mitigating factors of the MIPSASY are presented in Table 5. No differences in means scores were observed between men and women on any of the mitigating factors scales, $p > .05$.

Correlations among MIPSASY Scales

In order to examine the relations among the MIPSASY moral injury subscales and the mitigating factor scales, we conducted Pearson correlations among all of the scales. Correlations among the mitigating factors and moral injury subscales are presented in Table 4. Self-forgiveness was inversely related to both forgivability by others ($r = -.67$, p

< .00) and belief in atonement (r = -.42, p < .00). Forgivability by others and belief in atonement were positively correlated (r = .46, p < .00). None of the mitigating factors were significantly correlated with the witnessing subscale or the betrayal subscale, p >.05, which indicates, as expected, that these are nonredundant constructs. However, the self-forgiveness scale showed positive, moderate correlations with commission with agency (r =.21, p < .00), commission under duress (r = .20, p < .00), and omission (r = .13, p = .01). Comparatively, commission under duress was inversely related to forgivability by others (r = -.13, p = .01) and belief in atonement (r = -.16, p < .01), although these correlations are in the low range. Both commission with agency and omission were unrelated to forgivability by others and belief in atonement, p>.05.

Reliability: Internal Consistency

The second aim of the study was to demonstrate the internal consistency of the MIPSASY scales. To this aim, Cronbach's alpha was calculated for the best fitting model of the moral injury items (five-factor model) and the mitigating factors scales. Values ≥.70 are considered adequate, ≥.80 good, and ≥.90 excellent (Reuterberg & Gustafsson, 1992). Results are displayed in Table 5. The moral injury subscales demonstrated good internal consistency with values ranging from .80 to .93. Similarly, the mitigating factors also demonstrated good internal consistency with values ranging from .80 to .90.

Reliability: Test-Retest

To achieve the third aim, to evaluate the temporal stability of the MIPSASY, the association was examined between scores provided by participants the MIPSASY scores at the first time point and those administered 2 weeks later. Test-retest reliability is

considered good when the ICC $\geq$ .6. Intraclass correlation coefficients (ICC) for each scale and subscale were as follows: commission with agency (r = .84), commission under duress (r = .84), omission (r = .83, witnessing (r = .62), betrayal (r = .78), self-forgiveness (r = .81), forgivability by others (r = .66), and belief in atonement (r = .69).

Convergent and Discriminant Validity

In order to test convergent and discriminant validity, perpetration of moral injury subscale scores were compared to of the subscales of the MIES and the mitigating scales were compared to existing validated measures of similar constructs. It was expected that each subscale of the MIPSASY (e.g., commission with agency) would correlate more strongly with measures of convergent constructs (e.g, the MIES transgressions-self scale) than with measures of divergent constructs (e.g., the Heartland forgiveness scale).

As expected, and demonstrating convergent validity, the MIPSASY betrayal subscale was most highly correlated with the MIES betrayal subscale, r = .63, p <.00, whereas the MIPSASY witnessing subscale was most highly correlated with the MIES transgressions-others subscale, r = .50, p <.00. Similarly, the MIPSASY omission subscale, r = .46, p <.00, and the MIPSASY commission with agency subscale, r = .54, p <.00, were most highly correlated with the MIES transgression-self subscale. Furthermore, the omission, r = -.08, witnessing, r = .02 , and betrayal subscales, r = -.08, were unrelated to the Heartland self-forgiveness scale (total score), p >.05. However, the Heartland self-forgiveness scale was negatively related to the commission with agency, r = -.14, p<.01, and commission under duress, r =-.17, p<.01 subscales, but it should be noted that these correlations were in the small range. In regard to the Heartland forgiveness by others scale, the scale was unrelated to the commission with agency, r =

.00, omission, r = .03, and witnessing subscales, r = .03 all p>.05. The betrayal, r = -.11, p = .03, and commission under duress, r = -.17, p<.01 subscales did demonstrate small, negative correlations with the Heartland forgiveness by others scale.

In regard to the mitigating factors, we compared each scale to other measures of forgiveness and self-acceptance with the expectation that the mitigating scales would be related to these measures. As expected, the self-forgiveness, r = -.66, p<.00, forgivability by others, r =.48, p<.00, and belief in atonement, r = .35, p<.01, demonstrated moderate correlations with the Heartland self-forgiveness subscale. Similarly, the Heartland other forgiveness subscale demonstrated small correlations with the self-forgiveness, r = -.16, p<.01, forgivability by others, r = .21, p<.00, and belief atonement scale, r = .22, p<.00. Lastly, self-acceptance demonstrated moderate correlations with self-forgiveness, r = -.55, p<.00, forgivability by others, r = .47, p<.00, and belief in atonement, r = .39, p<.00. Unexpectedly, the self-forgiveness scale was inversely related to the Heartland self-forgiveness and other forgiveness subscale as well as the self-acceptance measure, whereas belief in atonement and forgiveness by others were positively correlated with these subscales

As further evidence of construct validity, we expected that the moral injury total score of the MIPSASY would be related to internalizing and externalizing symptoms as well as shame and guilt. As expected, the MIPSASY moral injury total score demonstrated small, significant correlations with depression, r = .18, p < .01, anxiety, r = .28, p <.00, and hostility, r = -.18, p < .00. Higher moral injury scores were related to higher scores of internalizing symptoms, but interestingly, higher moral injury scores were related to lower hostility scores. In regard to shame and guilt, the MIPSASY moral

injury total score demonstrated moderate, positive correlations with both the shame and guilt subscales of the State Shame and Guilt Scale (Marschall, Sanftner, & Tangney, 1994). These associations are consistent with Litz's (2009) model in which shame and guilt are conceptualized as mechanisms of moral injury which lead to internalizing and externalizing symptoms (Drescher et al., 2011).

Measurement Invariance

Our fourth aim was to test for measurement invariance of the MIPSASY moral injury subscales to determine whether the five-factor structure held for both women and men. Structural invariance is present when the factor structure or pattern of factor loadings on a measure is equivalent across groups (Schoot, Lugtig, & Hox, 2012). There are four aspects of invariance: configural, metric, phi, and residual. The structural invariance of the best fitting model (five-factor) was assessed using multigroup CFA procedures to test equality constraints across genders. In order to test for configural invariance, the factor loadings, correlations and covariances between factors, and residual error variances were allowed to vary between men and women. Results indicated that the five-factor pattern was equivalent across women and men, $\chi^2(274) = 455.02$, $p < .00$, *RSMEA* = .05, *CFI* = .95, *TLI* = .94, *SRMSR* = .06. The model provided an adequate to good fit for both men, $\chi^2(124) = 189.69$, $p < .01$, *RSMEA* = .07, *CFI* = .92, *TLI* = .90, *SRMSR* = .07, and women, $\chi^2(124) = 239.67$, $p < .00$, *RSMEA* = .06, *CFI* = .95, *TLI* = .94, *SRMSR* = .05.

In order to test for metric invariance, the factor loadings, in addition to the factor pattern, were constrained to be equal across women and men. Results indicated the model was an adequate to good fit to the data suggesting that the factor loadings of the

MIPSASY are similar across genders, $\chi^2(294) = 461.71$, $p < .00$, *RSMEA* = .06, *CFI* = .95, *TLI* = .95, *SRMSR* = .07. In order to test for phi invariance, the factor variances and covariances were also constrained. Results indicated the model was an adequate to good fit to the data, $\chi^2(274) = 455.02$, $p < .00$, *RSMEA* = .06, *CFI* = .95, *TLI* = .94, *SRMSR* = .07, continuing to suggest measurement invariance of the MIPSASY. Lastly, in order to test for residual invariance, the residual error variances were set to be equal. Testing for residual measurement invariance is the most constrained test of structural measurement invariance. Results indicated that model was an adequate fit to the data, $\chi^2(304) = 655.43$, $p < .00$, *RSMEA* = .08, *CFI* = .92, *TLI* = .92, *SRMSR* = .19, suggesting that explained variance for every item is likely the same across groups.

Table 1
Competing Factor Structure Models of the MIPSASY Moral Injury Scale

	Four-factor	Five-factor	Seven-factor
Item 1	1	1	1
Item 2	1	1	1
Item 3	1	1	1
Item 4	1	1	2
Item 5	1	1	2
Item 6	1	1	2
Item 7	2	2	3
Item 8	2	2	3
Item 9	2	2	4
Item 10	2	2	4
Item 11	2	2	4
Item 12	3	3	5
Item 13	3	3	5
Item 14	3	3	5
Item 15	4	4	6
Item 16	4	4	6
Item 17	4	5	7
Item 18	4	5	7

Table 2
Fit Indices for Competing Factor-Structure Models of the MIPSASY Moral Injury Scale

	df	χ^2	*RMSEA*	*CFI*	*TLI*	*SRMSR*
Four Factor	127	306.09	.06	.94	.93	.06
Five Factor	124	282.37	.05	.95	.94	.05
Seven Factor	114	196.78	.04	.97	.97	.03

Note. RSMEA = root mean square error of approximation; CFI = comparative fit index; TLI = Tucker-Lewis Index; SRMSR = standardized root mean square residual. For all models, chi square $p < .05$.

Table 3
Unstandardized Factor Loadings of the Five-Factor Structure Model of the MIPSASY Moral Injury Scale

Item	*Factor 1*	*Factor 2*	*Factor 3*	*Factor 4*	*Factor 5*
Item 1	.77*	-	-	-	-
Item 2	.80*	-	-		-
Item 3	.69*	-	-	-	-
Item 4	.73*	-	-	-	-
Item 5	.62*	-	-	-	-
Item 6	.56*	-	-	-	-
Item 7	-	-.87*	-	-	-
Item 8	-	-.84*	-	-	-
Item 9	-	-.86*	-	-	-
Item 10	-	-.87*	-	-	-
Item 11	-	-.88*	-	-	-
Item 12	-	-	.77*	-	-
Item 13	-	-	.64*	-	-
Item 14	-	-	.88*	-	-
Item 15	-	-	-	-.79*	-
Item 16	-	-	-	-.59*	-
Item 17	-	-	-	-	.74*
Item 18	-	-	-	-	.88*

Note. Factor 1 = Commission with agency; Factor 2 = Commission under duress; Factor 3 = Omission; Factor 4 = Witnessing; Factor 5 = Betrayal. **$p < .01$

Table 4
Correlations among MIPSASY Moral Injury and Mitigating Factor Scales

	Com-Age	Com-Dur	Omiss-ion	Wit-nessing	Betray-al	Total	Self-for	Other-for	Bel-at
Moral Injury									
Com-Age	1	.30**	.46**	.41**	.40**	.82**	.21**	-.07	-.10
Com-Dur	.30**	1	.31**	.16**	.19**	.73**	.20**	-.13*	-.16**
Omiss-ion	.46**	.31**	1	.45**	.28**	.71**	.13*	-.03	-.05
Wit-nessing	.41**	.16**	.45**	1	.42**	.44**	-.01	.01	.06
Betray-al	.40**	.19**	.28**	.42**	1	.39**	.09	-.06	.02
Total Score	.82**	.73**	.71**	.44**	.39**	1	.25**	-.10*	-.14*
Mitigating Factors									
Self-for	.21**	.20**	.13*	-.01	.09	.25**	1	-.67**	-.42**
Other-for	-.07	-.13*	-.03	.01	-.06	-.10*	-.67**	1	.46**
Bel-at	-.10	-.16**	-.05	.06	.02	-.14*	-.42**	.46**	1

Note. Com-Age: commission with agency; Com-Dur: commission under duress; Self-for: self-forgiveness; Other-for: forgivability by others; Bel-at: belief in atonement.
*p <.01 *p <.00

Table 5
Descriptive Statistics of the MIPSASY Scales by Gender and Scale Reliability Estimates

	Total Sample		Males		Females		
	M	*Sd*	*M*	*sd*	*m*	*Sd*	Cron-bach's α
Moral Injury							
Commiss-ion with Agency	21.22	5.08	21.71	5.08	21.01	5.08	0.86
Commiss-ion under Duress	9.08	4.56	8.39	4.15	9.36	4.70	0.93
Omiss-ion	10.33	3.12	10.71	3.00	10.18	3.16	0.84
Wit-nessing	8.57	1.72	8.89*	1.34	8.44*	1.81	0.80
Betrayal	7.67	2.21	7.61	1.93	7.69	2.32	0.80
Total Score	40.63	9.68	40.80	8.49	40.57	10.13	0.89
Mitigating Factors							
Self-forgive-ness	33.47	9.82	32.92	10.67	33.70	9.47	0.90

Table 5 Continued

	Total Sample		Males		Females		
	M	*Sd*	*M*	*Sd*	*m*	*Sd*	Cron-bach's α
Forgiva-bility by others	16.66	2.76	16.41	2.78	16.77	2.74	0.80
Belief in atone-ment	16.77	2.90	16.67	3.16	16.81	2.79	0.86

Note. The only significant gender difference observed was on the witnessing scale. **p* <.05

Table 6
Means and Standard Deviations for Validation Measures by Gender

	Total Sample		Males		Females	
	m	*Sd*	*M*	*Sd*	*M*	*sd*
MIES – Self	15.51	5.31	16.06	4.98	15.28	5.42
MIES – Other	9.01	2.56	9.54*	1.94	8.78*	2.74
MIES – Bet	10.12	4.30	9.56	4.25	10.34	4.30
HFS-Self	30.06	6.52	30.78	6.61	29.77	6.48
HFS-Others	30.10	6.67	30.26	6.23	30.04	6.61
Self-condemn-ation	58.27	13.80	57.18	14.49	58.69	13.51
Depress-ion	32.66	8.64	31.89	9.11	32.97	8.44
Anxiety	41.03	8.23	38.49*	8.76	42.08*	7.78
Hostility	37.58	4.23	36.49*	3.94	38.02*	4.28

Table 6 Continued

	Total Sample		Males		Females	
	m	*Sd*	*M*	*Sd*	*M*	*sd*
Shame	9.23	4.20	9.20	4.21	9.24	4.19
Guilt	13.02	5.31	12.53	5.41	13.22	5.26

Note. MIES = Moral Injury Events Scale; Bet = Betrayal; HFS – Heartland Forgiveness Scales; *t*-tests were calculated to examine gender differences among the validation measures. Men reported higher rates of witnessing others transgressions on the MIES, whereas women reported higher rates of hostility and higher rates of anxiety. *$p<.05$

DISCUSSION

In the current study, we aimed to first demonstrate the utility of the construct of moral injury in the study of youths' nontraumatic transgressions, and secondly, to create a developmentally-informed measure that would allow us to assess moral injury among children, adolescents, and emerging adults. As a first step to this aim, we developed the MIPSASY to assess moral injury and mitigating factors, and examined its psychometric properties in a sample of emerging adults. Specifically, we examined the factor structure, internal consistency, measurement invariance, and construct validity of the MIPSASY.

Results indicated that a five-factor solution was the best fitting latent structure for the moral injury items on the MIPSASY. During the development of the MIPSASY, we originally envisioned a four-factor structure; however, our analyses suggested that the witnessing subscale should be divided into two separate subscales: witnessing and betrayal. This coincides with prior work in regard to the factor structure of the MIES, the only existing measure of moral injury, in which both Nash and colleagues (2013) and Bryan and colleagues (2014) found that the MIES contains a separate subscale that assess perceived betrayals by others. Furthermore, studies assessing the construct validity of moral injury have consistently found that betrayal and loss of trust are predominant themes in interviews with military veterans (Drescher et al., 2001; Vargas et al., 2013). Similarly, literature on youth's traumatic experiences also suggest that events in which a youth's trust is violated (i.e., by caregivers or other trusted adults) can result in worse

psychological outcomes than traumatic experiences that do not contain a betrayal component (Freyd, 1996). Subsequently, it will be important for future work to assess how morally injurious events with a betrayal component affect the manifestation of moral injury and whether these events result in worse outcomes.

Apart from moral injury, results suggested a one-factor structure was the best fit for two of the mitigating factor scales, forgivability by others, and belief in atonement. On the other hand, results indicated that the self-forgiveness scale may contain four factors that assess varying degrees of self-forgiveness. Furthermore, we observed that these mitigating factors demonstrated moderate correlations among each other, and were either unrelated or demonstrated small correlations with the moral injury subscales. This demonstrates that the mitigating factors are nonredundant constructs. Litz's and colleagues (2009) model suggests that these factors may influence the development of moral injury, and further research on the construct validity of moral injury also suggest that these constructs could aid in moral repair (Currier et al., 2014; Drescher et al. 2011; Vargas et al., 2013). Future research will need to test models examining how these factors may attenuate the effects of moral injury, both before and after morally injurious events occur. For example, it may be that youth higher in dispositional self-forgiveness may be less likely to develop moral injury after a transgression compared to youth low in this trait.

Once the factor structure of the MIPSASY was established, its psychometric properties were evaluated. The MIPSASY demonstrated good internal consistency in which Cronbach's alpha ranged from .80 to .93 for the moral injury subscales and .80 to .90 for the mitigating factor scales. Similarly, the MIPSASY demonstrated good temporal

stability with ICCs over 2 weeks, ranging from .62 to .84. We also demonstrated convergent and divergent validity. In regard to the moral injury subscales, they were more highly correlated with the MIES than a measure of self-forgiveness. Further, the mitigating factors demonstrated correlations with self-forgiveness and self-condemnation. However, unexpectedly, the self-forgiveness scale was inversely related to forgiveness of self and others as well as self-acceptance. It may be that the self-forgiveness scale is measuring another construct that is more closely tied to moral disengagement. Additionally, as expected, moral injury was related to internalizing and externalizing symptoms, including shame and guilt, which is consistent with the Litz et al. (2009) model of moral injury. Lastly, we examined whether the factor structure varied as a function of gender given that prior work has not included women in their samples and has yet to demonstrate measurement invariance. The MIPSASY demonstrated four levels of measurement invariance suggesting that it assesses moral injury similarly for men and women.

Limitations and Future Directions

A few limitations of the current study should be noted. One limitation of this work is the convenience sample utilized and their limited range of reported morally injurious events. Our sample was primarily a Caucasian, female, and college-educated sample of emerging adults. Therefore, more research is needed to evaluate the psychometric properties of the MIPSASY in additional populations including racially diverse and lower SES samples. Although not a focus of the present study, it should be noted that a majority of participants provided narratives about moderately transgressive acts in the context of romantic relationships. This is not surprising given that establishing

romantic relationships is a salient developmental task during emerging adulthood (Shulman et al., 2005). Subsequently, the validity and reliability of the MIPSASY needs to be extended to other populations with a wider range of transgressive events especially considering that the moral injury and the MIES were conceived in the context of extreme moral transgressions. Lastly, a limitation of the MIPSASY as it currently stands is that both the witnessing and betrayal subscales only consist of two items each. Moving forward, it will be important to add additional items tapping theses subscales, and validate their inclusion in future research.

Additionally, it will be important to validate the MIPSASY and the construct of moral injury in younger populations. In the current study, we started with a sample of emerging adults given this population was the most similar in age and developmental level to the samples used in the existing literature of the MIES and moral injury more generally. However, in order to further examine the utility of the construct of moral injury in youth populations, the psychometric properties of the MIPSASY will need to be assessed in children and adolescents. Furthermore, youth populations that may be at particular risk for moral injury should be included in these samples. This includes child soldiers, detained youth, and gang-involved youth, all of which may be more likely to encounter morally injurious events in their daily lives (Kerig, Wainryb, Twali & Chaplo, 2013; Wainryb & Pasupathi, 2010; Welfare & Hollin, 2012).

Although this investigation has argued that youth are likely to harm others in their daily social interactions, the transgressions described thus far may not be as heinous as the transgressions that these at-risk populations may participate in. For example, gang-involved youth may be required to perpetrate violence against others as part of their gang

initiations or activities, such as in acts of perpetration toward rival gang members (Alleyne & Wood, 2010; Klein & Maxson, 2006). Similarly, 18% of juvenile arrests in 2011 fell within the category of violent crimes (e.g., murder, aggravated assault, robbery, and forcible rape; Office of Juvenile Justice and Delinquency Prevention, 2013) suggesting a large percentage of detained youth have caused significant harm to others. Furthermore, these events may be more similar to the level of traumatic transgressive events that the MIES and construct of moral injury were originally theorized to encompass. Therefore, studying moral injury in these at-risk youth populations could allow scholars the opportunity to examine moral injury in a population with transgressive events that transcend the mild events (i.e., cheating in romantic relationships) that were reported in the current sample. Subsequently, the transgressions of these at risk youth should be given particular attention as the construct of moral injury is further validated.

In the current study, we were able to demonstrate that the structure of the MIPSASY was invariant across women and men. Further, we did not observe gender differences between men and women on the MIPSASY scales and subscales. However, future research may find gender differences in the way the Litz and colleague's model (2009) of moral injury operates in terms of its proposed mechanisms, risk factors, and protective factors. For example, the extant literature suggests that women and girls may be more prone to experience and guilt as well as invested in maintaining interpersonal relationships in comparison to men (Skoe et al., 1996; Williams & Bybee, 1994), and therefore women and girls may be at differential risk for developing moral injury. In terms of protective factors, Litz and his colleagues (2009) proposed that having forgiving social supports may help mitigate the effects of moral injury by reducing the degree to

which the individual experiences their transgression as conflictual and dissonant. Previous research suggests that women perceive and benefit more from social support in comparison to men and that this effect may be related to gender roles (Reevy & Maslach, 2001). Further, studies about the relations among PTSD, social, support, and gender, suggest that gender may moderate the association between social support from significant others and PTSD symptoms (Andrew et al., 2003; Crevier et al., 2014). Therefore, future research should investigate how social support may function differently among men and women as a protective factor for moral injury.

Conclusion

Our study adds to the growing literature on moral injury and is the first study to describe how moral injury may be implicated in youth's moral development. To this aim we developed the MIPSASY, a measure designed to assess moral injury and factors that may mitigate the development of moral injury in children, adolescents, and emerging adults. Results indicated that the MIPSASY is a valid, reliable, and invariant measure of moral injury for youth. Future research will need to continue to validate the MIPSASY in youth populations given that moral injury is an important construct to include in the study of moral development and elucidate how harm may come from harm.

APPENDIX

MORAL INJURY PERPETRATION, SELF-FORGIVENESS, AND

ATONEMENT SCALES FOR YOUTH (MIPSASY)

Instructions: Please read each statement carefully and circle the number that best describes how **you feel right now**. Remember to rate each item and circle only one number for each item.

	Strongly Disagree	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**
Perpetration of moral injury					
Commission with agency					
1. I have done things to other people that I think are wrong					
2. I have done things to other people that break my own personal rules about what is right and wrong					
3. I have done things that hurt another person					
4. I have done bad things to someone					
5. I have done things to other people that I think I should be punished for					
6. I have done harm to other people and that bothers me					
Commission under duress					
7. I have been forced to do things to others that I think are wrong					
8. I have been forced to do things to others that break my own personal rules about what is right and wrong					

9. Someone else has made me do a bad thing to another person					
10. Even though I didn't want to, others have forced me to do hurtful things to people					
11. People have made me do bad things to others even when I didn't want to					
Omission					
12. I let a bad thing happen to someone when I should have done something to stop it					
13. There have been times when I failed to do the right thing and someone else got hurt					
14. I feel disappointed with myself because there are times when I have just stood by and let a bad thing happen to another person					
Witnessing morally injurious events					
15. .I have seen people do things that break my own personal rules about what is right and wrong.					
16. I have seen someone do bad things to other people and that bothers me					
17. I feel betrayed by people I once trusted					
18. Someone I trusted did something I think is really wrong					
Self-forgiveness					
19. I can never forgive myself for the hurtful things I've done to other people					
20. Although I have done some bad things to people, over time I've been able to forgive myself for them (R)					
21. I feel like I'm a bad person because of the bad things I've done to others					
22. I've learned from the bad things I've done to people and that has helped me to forgive myself for them(R)					
23. With time, I've been able to forgive myself for wrong things I've done to others (R)					
24. I can't stop criticizing myself for things I've done wrong to other people					

25. When I think about hurtful things I've done to others, I want to punish myself					
26. Even though I've done bad things to others, I try not to be too hard on myself (R)					
27. When I think about bad things I've done to others, I put myself down					
28. Even though I've done things that hurt other people, I believe I am still an okay person (R)					
29. When I think about the ways I've hurt others, I believe I am a bad person					
30. When I think about bad things I've done to others, I believe I still deserve to be loved (R)					
31. When I think of the ways I have hurt others, I feel ashamed of myself					
32. When I think of the ways I've hurt others, I feel like I shouldn't show my face in public					
33. When I think of the bad things I've done to others, I feel like I have no right to be part of society					
Forgivability by others					
34. I can never be forgiven for the things I've done wrong to other people(R)	1	2	3	4	5
35. People are never going to forgive me for the ways I have done harm to others(R)					
36. I will be forgiven for the bad things I've done to others					
37. People will be able to accept me even though I've done hurtful things to others					
Belief in atonement					
38. There are things I can do to make up for the bad things I've done to others	1	2	3	4	5
39. Even though I've done things to other people that are wrong, I believe I can	1	2	3	4	5

still make it better					
40. There is nothing I can do to make up for the bad things I have done to others(R)	1	2	3	4	5
41. I've hurt other people and there is nothing I can ever do to make up for it (R)	1	2	3	4	5

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